

REMARKS

Claims 1, 6-8, 11-14, 16, and 25-33 are currently pending. Claims 1 and 25 have been amended in this response to specifically exclude polyethylene from the laminate. In addition, claim 34, which further defined the laminate as containing a third layer comprising polyethylene, has been canceled.

Support for these amendments can be found in the as-filed specification and claims. For example, canceled claims 17 and 34 both recited the laminate “further comprising a third layer comprising a polyethylene film.” In order for these claims not to be superfluous to the independent claimed from which they depended, the independently claimed laminates could not have contained a layer comprising a polyethylene film. In other words, by claim differentiation, the amendments to claims 1 and 25 now expressly recite what was implicitly claimed prior to this amendment.

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1, 6-8, 11-14, 16, and 25-34 in condition for allowance. Applicants submit that the above proposed amendments do not raise any new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships now claimed were either earlier claimed or inherent in the claims as examined. Therefore, this Amendment should allow for immediate action by the Examiner.

Finally, Applicants submit that entry of the above amendment would place the application in better form for appeal, should the Examiner continue to dispute the patentability of the pending claims.

I. Double Patenting Rejection

The rejection of claims 1, 6-14, 16, and 24-33 as allegedly unpatentable over claims 1-12 of U.S. Pat. No. 6,713,411 to Cox, et al. under the judicially created doctrine of obviousness-type double patenting, has been rendered moot by the terminal disclaimer submitted herewith.

II. Claims Do Comply With the Enablement Requirement

The Examiner has maintained the rejection of claims 1, 6-8, 11-14, 16, and 25-34 under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the enablement requirement. According to Examiner,

because Chen discloses the same structure as Applicant, i.e., laminates comprising PVC film, **polyethylene film**, synthetic nonwoven fabric, adhesive, antimony oxide and chlorinated paraffin fire retardants, as required by the present claims, it should have passed the NFPA test and leads the Examiner to believe that there is missing information in the present specification and claims that aids the structure in Applicant's claims to pass the NFPA test.

Final Office Action at 4. [Emphasis added] Applicants respectfully disagree with this position, for at least the following reasons.

As acknowledged by the Examiner, and expressly taught in the Examples 1 and 2 of Chen (Example 2 being the laminate tested in the Rule 132 Declaration of record), Chen's structure includes a polyethylene film, which is now expressly excluded from the present claims as amended. To the extent that the present disclosure describes using a polyethylene film, it is specifically "to enhance protection against polar solvent." As-filed Specification at page 8, 3rd full paragraph. However, the use of a polyethylene film is

not required, especially to pass the claimed flame test, NFPA 701-1989. For this reason alone, the Examiner's assertion that Chen, which requires a polyethylene film, discloses the same structure as Applicant is incorrect.

For substantially the same reason, the Examiner's assertion that there is missing information in the present specification and claims that aids the structure in Applicant's claims to pass the NFPA test is inaccurate. As Applicants have determined, and as shown in the Rule 132 Declaration of record, the inclusion of a non-halogenated film supplies the fuel and pathway for flame propagation, especially in a vertical flame test such as NFPA 701-1989. This is especially true for the inclusion of a polyethylene film, such as that disclosed in Chen and tested in the Rule 132 Declaration.

In fact, Chen recognizes that polyethylene fibers can cause fire to propagate, when it teaches, in relevant part:

These fibers are covered with a compound 3, the composition of which is further discussed below and which will critically contribute to the fire protection of the fibers. **This can be important because reinforcing fibers can carry the fire from one segment of the laminate to another** if temperature conditions are such that the film material melts away, while the fibers have a higher softening temperature and remain intact. **This condition is particularly likely to occur when the film consists of a light weight polyethylene film and the reinforcing fibers of a polyamide or particularly of nylon.**

R. C. Nametz states in the most recent comprehensive summary on this subject (Industrial and Engineering Chemistry, Vol. 62, No. 3, page 47, Col. 2 lines 33-34; (1970) "The continuity and expansion of fire is caused by the propagation of fire across a gap in the film where this has melted, in spite of the fact that the film itself contained flame extinguishing material . . . [Col. 2, line 66 to col. 3, line 25].

As made clear by Chen, a polyethylene film can cause a fire to propagate across a laminate, and such a material will not necessarily be fire resistant, even if it contains flame extinguishing material. To address this problem, Chen uses a flame resistant adhesive between the laminate layers. *See, e.g.*, col. 4, lines 36-65, teaching that fire resistant adhesive permits the use “potentially burnable fibers.”

While such an adhesive is apparently adequate for the test method of interest to Chen, it is not adequate for NFPA 701-1989, as claimed. In other words, as one skilled in the art would appreciate, the adequate fire resistance for Chen’s laminate is one that achieves sufficient fire resistance in a horizontal burning method (ASTM D-568), and not necessarily in NFPA 701-1989, the method claimed and reported in the previously filed Rule 132 Declaration¹. *See, e.g.*, col. 5, lines 66-67 of Chen (stating that the “resultant film showed a fire resistance when tested by horizontal burning method”) and col. 6, lines 14-15 (describing the ASTM testing method as D-568).

As shown in the Rule 132 Declaration, a polyethylene layer, even if treated with a flame resistant adhesive, will not prevent flammability from traveling up the pathway of the polyethylene film or the untreated fabric, as is measured in under the NFPA 701-1989 protocol. In other words, in the Rule 132 declaration Chen fails the NFPA 701-1989 test because it contains a source of fuel which burns when a vertical flame is applied, despite not burning when a horizontal flame is applied per ASTM D-568.

¹ Unlike a horizontal burning method, NFPA 701-1989 measures the vertical ignition resistance properties of hanging materials. *See, e.g.*, section 3-3.2 of Exhibit 1 filed with the Rule 132 Declaration on December 22, 2005 (teaching that when conducting this flame test, “[t]he burner shall be moved under the specimen so that the flame is applied vertically to the lower end of the specimen.”)(Emphasis added).

For these reasons, Applicants respectfully disagree with the Examiner's conclusion that Chen "discloses the same structure as Applicants" since, as shown, neither the form nor function of the "fire resistant" fibers disclosed in Chen and claimed are the same. Furthermore, Applicants disclosure does describe how the claimed laminate is not only different from the Chen patent, but also why such differences lead the claimed invention to pass the NFPA test that Chen fails.

Thus, the rejection under 35 U.S.C. §112, first paragraph is improper and should be withdrawn.

IV. Conclusion

In view of the foregoing remarks, Applicants request the Examiner's reconsideration of the application, and the timely allowance of the pending claims.

If there is any fee due in connection with the filing of this Response, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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By: 

Louis M. Troilo
Reg. No. 45,284